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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,491	10/25/2000	David W. Paranchych	NORT0031US(10955RRUS02U)	3619

7590 04/17/2003

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EXAMINER

NGUYEN, DAVID Q

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 04/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/696,491

Applicant(s)

PARANCHYCH ET AL.

Examiner

David Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

“detecting a given number of samples of the predetermined information” is not mentioned in the specification.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1,3,9,11-13,20,22,26-27, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Willenegger et al. (US Patent Number 5933781).

Regarding claim 1 and 20, Willenegger discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, and a system for use in a mobile communications system, comprising: detecting an error in reception of predetermined information in a link between the base station and the mobile unit when traffic channels are not being communicated (see col. 5, lines 40-55; detecting an error using a pilot channel, it is

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apparent that traffic channels are not being communicated at this time); and adjusting a power control element based on the detected error (see col. 5, lines 59-61); a receiver to receive control signaling and traffic signaling (see col. 5, lines 29-40); a controller to detect for error in the received control signaling and to adjust a power control condition based on detect error (see col. 5, lines 40-55).

Regarding claim 3, Willenegger also discloses receiving a pilot channel from the mobile unit over the link, the pilot channel containing the predetermined information (see col. 5, lines 40-55).

Regarding claim 9, Willenegger also discloses communicating a power control command based on the power control element to affect transmission power of the mobile unit (see col. 5, lines 57-64).

Regarding claims 11 and 26, Willenegger also discloses receiving the predetermined information over a reverse link; the control and traffic signaling are communicated in a reverse link between a mobile unit and a base station (see col. 5, lines 41-55).

Regarding claims 12 and 27, Willenegger also discloses receiving the predetermined information over a forward link; the control and traffic signaling are communicated in a forward link between a mobile unit and a base station (see col. 5, lines 7-12).

Regarding claim 13, Willenegger also discloses receiving the predetermined information over a link according to a code-division multiple access protocol (see col. 6, lines 24-27).

Regarding claim 21, Willenegger also discloses wherein the control signaling comprises a pilot channel (see col. 5, lines 42-55).

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Regarding claim 22, Willenegger also discloses wherein the receiver is adapted to receive code division multiple access control signaling (see col. 6, lines 23-28).

Regarding claim 30, Willenegger discloses an article comprising one or more machine-readable storage media containing instructions for performing tasks in a mobile communications system, the mobile communications system having a mobile unit, a base station, and a link between the mobile unit and base station, the instructions when executed causing a controller to: detect for one or more errors in control signaling received over the link; and adjust a power control element based on the detected one or more errors in the control signaling (see explanation in claim 1 and 20).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Kim et al. (US Patent Number 6438119).

Regarding claim 2, Willenegger discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising all of the limitations as claimed above. Willenegger is silent to disclose detecting the error occurs during a discontinuous transmission mode. However, Kim discloses detecting the error occurs during a

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discontinuous transmission mode (see col. 2, lines 8-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Kim to Willenegger so that the system does not use traffic channel.

6. Claims 4-5, 28-29, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Weaver et al. (US Patent Number 5727033).

Regarding claims 4 and 28, Willenegger discloses a system and a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising all of the limitations as claimed above. Willenegger is silent to disclose adjusting the power control element comprises adjusting a ratio of energy per bit to noise spectral density. However, Weaver discloses adjusting the power control element comprises adjusting a ratio of energy per bit to noise spectral density (see col. 3, lines 64-67). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Willenegger in order to improve good signal quality.

Regarding claims 5 and 29, Willenegger discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising all of the limitations as claimed above. Willenegger is silent to disclose adjusting the power control element comprises adjusting a target E_b/N_0 value. However, Weaver discloses adjusting the power control element comprises adjusting a target E_b/N_0 value (see col. 4, lines 28-33). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Willenegger in order to improve good signal quality.

Regarding claims 31-32, Willenegger discloses an article comprising all of the limitations as claimed above. Willenegger is silent to disclose instructions that when executed cause the controller to increase or decrease a target ratio of energy per bit to noise spectral density if an error rate exceeds or does not exceed threshold. However, Weaver discloses instructions that when executed cause the controller to increase or decrease a target ratio of energy per bit to noise spectral density to maintain a constant symbol error rate (see col. 4, lines 29-32). It is apparent to instruct that when executed cause the controller to increase or decrease a target ratio of energy per bit to noise spectral density if an error rate exceeds or does not exceed threshold. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Willenegger in order to improve good signal quality.

Regarding claim 33, Willenegger discloses a data signal embodied in a carrier wave comprising one or more code segments containing instructions for performing tasks in a mobile communications system, the instructions when executed causing a controller to: monitor one or more errors in receiving predetermined pilot signal information when traffic signaling is not being transmitted (see explanation in claim 1 and 20). Willenegger is silent to disclose performing outer loop power control based on monitored one or more errors. However, Weaver discloses performing outer loop power control based on the monitored one or more errors (see col. 4, lines 26-40). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Weaver to Willenegger in order to improve good signal quality.

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7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Chen et al. (US Patent Number 6208699).

Regarding claim 6, Willenegger discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising all of the limitations as claimed above. Willenegger is silent to disclose detecting the error comprises detecting the predetermined information over a given period of time. However, Chen discloses detecting the error comprises detecting the predetermined information over a given period of time (see col. 8, lines 35-47; table 1; col. 9, lines 11-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Chen to Willenegger in order to improve good signal quality.

8. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Nakano et al. (US Patent Number 5933782).

Regarding claims 8 and 10, Willenegger discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising all of the limitations as claimed above. Willenegger is silent to disclose detecting the error comprises detecting a given number of bits of the predetermined information; and detecting a bit error rate. However, Nakano discloses detecting the error comprises detecting a given number of bits of the predetermined information; and detecting a bit error rate (see col. 7, lines 58-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Nakano to Willenegger in order to improve good signal quality.

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9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Paatelma (US Patent Number 6463042).

Regarding claim 14, Willenegger discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising all of the limitations as claimed above. Willenegger is silent to disclose detecting that the base station is in discontinuous transmission mode. However, Paatelma discloses detecting that the base station is in discontinuous transmission mode (see col. 5, lines 2-7). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Paatelma to Willenegger in order to detect traffic channel not being communicated.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Alanara (US Patent Number 6286122).

Regarding claim 15, Willenegger discloses a method of performing power control in a mobile communications system having a base station and a mobile unit, comprising all of the limitations as claimed above. Willenegger is silent to disclose detecting that the mobile unit is in a discontinuous transmission mode. However, Alanara discloses detecting that the mobile unit is in a discontinuous transmission mode (see col. 3, lines 8-10). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Alanara to Willenegger in order to detect traffic channel not being communicated.

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Alanara (US Patent Number 6286122) and further in view of Lee et al. (US Patent Number 6490268).

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Regarding claim 16, Willenegger discloses a method of performing power control in a mobile communications system modified by Alanara comprising all of the limitations as claimed above. They are silent to disclose detecting that the mobile unit is in discontinuous transmission mode comprises detecting a power level of a traffic channel transmitted by the mobile unit. However, Lee discloses detecting that the mobile unit is in discontinuous transmission mode comprises detecting a power level of a traffic channel transmitted by the mobile unit (see col. 2, lines 15-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Lee to Alanara, and Willenegger in order to improve signal quality of traffic channel.

12. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Alanara (US Patent Number 6286122) and further in view of Lee et al. (US Patent Number 6490268) and Ziv et al. (US Patent Number 5884187).

Regarding claim 19, Willenegger discloses a method of performing power control in a mobile communications system modified by Alanara comprising all of the limitations as claimed above. They are silent to disclose adjusting the error control element is based on the detected error if the mobile unit is detected to be in the discontinuous transmission mode, the method further comprising adjusting the error control element based on a frame error rate of traffic channels when the mobile unit is detected to be not in discontinuous transmission mode. However, Lee discloses adjusting the error control element is based on the detected error if the mobile unit is detected to be in the discontinuous transmission mode (see col. 2, lines 17-24); and Ziv discloses adjusting the error control element based on a frame error rate of traffic channels when the mobile unit is detected to be not in discontinuous transmission mode (see col. 14, lines

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43-59). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Lee and Ziv to Alanara and Willenegger in order to improve DTX technique.

13. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Alanara (US Patent Number 6286122) and further in view of Gilhousen et al. (US Patent Number 5812938).

Regarding claim 17 and 18, Willenegger discloses a method of performing power control in a mobile communications system modified by Alanara comprising all of the limitations as claimed above. They are silent to disclose detecting a state of a predetermined information field; wherein the information field comprises one or more power control bits of a data frame transmitted by the mobile unit. However, Gilhousen discloses a state of a predetermined information field; wherein the information field comprises one or more power control bits of a data frame transmitted by the mobile unit (see col. 8, lines 55-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Gilhousen to Alanara and Willenegger in order to improve DTX technique.

14. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Chen et al. (US Patent Number 6208699).

Regarding claim 23, Willenegger discloses a system comprising all of the limitations as claimed. Willenegger does not mention the receiver is adapted to receive IS-2000 control signal. However, Chen discloses the receiver is adapted to receive IS-2000 control signal (see col. 8, lines 14-29). Therefore, it would have been obvious to one of ordinary skill in the art at the time

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the invention was made to provide the above teaching of Chen to Willenegger in order to improve system.

15. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Lee et al. (US Patent Number 6208699).

Regarding claims 24 and 25, Willenegger discloses a system comprising all of the limitations as claimed. Willenegger does not disclose wherein the traffic signaling is not transmitted during certain periods, the controller adapted to detect for error during such periods; wherein the traffic signaling is not transmitted during discontinuous transmission mode. However, Lee discloses the traffic signaling is not transmitted during certain periods, the controller adapted to detect for error during such periods; wherein the traffic signaling is not transmitted during discontinuous transmission mode (see col. 2, lines 20-24). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Chen to Willenegger in order to detect traffic channel not being communicated.

16. Claims 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Willenegger et al. (US Patent Number 5933781) in view of Weaver et al. (US Patent Number 5727033) and further in view of Alanara (US Patent Number 6286122).

Regarding claim 34, Willenegger discloses a data signal embodied in a carrier wave modified by Weaver comprising all of the limitations as claimed above. They are silent to disclose wherein the instructions when executed further cause the controller to further detect that a system has entered into a discontinuous transmission mode. However, Alanara discloses detect

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that a system has entered into a discontinuous transmission mode (see col. 3, lines 7-11).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Alanara to Willenegger and Weaver in order to improve signal quality of system.

Regarding claim 35-36, Willenegger discloses a data signal embodied in a carrier wave modified by Weaver and Alanara comprising all of the limitations as claimed above. Alanara also disclose the system comprises a mobile unit and a base station (see fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the above teaching of Alanara to Willenegger and Weaver in order to power control system is applied in mobile wireless system.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Q Nguyen whose telephone number is 7036054254. The examiner can normally be reached on 8:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dwayne Bost can be reached on 703-305-4778. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-9508 for regular communications and 703-305-9508 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

DN

April 14, 2003

David Q. Nguyen


ERIKA GARY
PATENT EXAMINER